

**IN THE CLAIMS:**

Please cancel original application claims 1-45 and replace them with the following new claims:

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- 46. (New) A process for the polymerization of wood cellulose, comprising:  
providing a solution containing an organic solvent and one or more molecules selected from  $R-Xa-Xb_3$  or  $R_3-Xa-Xb$ , wherein R is an alkyl group, Xa is a trivalent, tetravalent or pentavalent atom, and Xb is a halogen, a hydroxyl group, an alkoxy group, a phenoxy group, a benzyloxy group or an aryloxy group with a polycyclic aromatic ring;  
applying said solution to wood cellulose and,  
exothermically reacting said one or more molecules with said wood cellulose wherein said one or more molecules are cross-linked to the wood cellulose through one or more of the hydroxyl groups on the wood cellulose.
47. (New) A process according to claim 46, wherein the one or more molecules are hydrolyzed prior to being cross-linked to the hydroxyl groups of said wood cellulose.
48. (New) The process according to claim 46, wherein said organic solvent is water compatible.
49. (New) The process according to claim 48, wherein said one or more molecules undergo hydrolysis before being cross-linked to the wood cellulose.

50. (New) The process according to claim 46, wherein said exothermic reaction is initiated by a catalyst.

51. (New) The process according to claim 50, wherein said catalyst is an acid.

52. (New) The process according to claim 51, wherein said acid is a hydrolysis product of said one or more molecules.

53. (New) A process as recited in claim 46, wherein the solution is from 0.1% to 5% acid.

54. (New) A process as recited in claim 51, wherein said acid is about 0.5% of said solution by volume.

55. (New) The process according to claim 48, further comprising adding water to the solution.

56. (New) The process according to claim 50, wherein said catalyst is a base.

57. (New) The process according to claim 48, further comprising adding water to the wood cellulose.

58. (New) The process according to claim 46, wherein said one or more molecules includes  $(\text{CH}_3)_3\text{SiCl}$ .

59. (New) The process according to claim 46, wherein said one or more molecules includes  $\text{CH}_3\text{SiCl}_3$ .

60. (New) A process as recited in claim 46, where the concentration of said one or more molecules in total solution is within the range of 0.1% to 9% by weight.

61. (New) A process as recited in claim 48, wherein the organic solvent has a boiling point under  $100^\circ\text{C}$ .

62. (New) A process as recited in claim 46, wherein 0.1% to 10% of the hydroxyl groups on the wood cellulose are replaced by said at least one molecule.

63. (New) The process according to claim 46, wherein said solution contains an aqueous component.

64. (New) The process according to claim 46, wherein said solution additionally contains  $\text{R}_2\text{SiX}_2$ , wherein R is as defined above, and X is halogen, an alkoxy group, an aryloxy group or a benzyloxy group.

65. (New) A process for polymerization of wood cellulose, comprising:  
providing a solution containing one or more molecules selected from  $R-Xa-Xb_3$  or  $R_3-Xa-Xb$ , wherein R is an alkyl group, Xa is a trivalent, tetravalent or pentavalent atom, and Xb is a halogen, hydroxyl group, an alkoxy group, a phenoxy group, a benzyloxy group or an aryloxy group with a polycyclic aromatic ring, and an organic solvent having a boiling point of less than 100°C;  
applying said solution to wood cellulose; and  
exothermically reacting said one or more molecules with said wood cellulose wherein said one or more molecules are cross-linked to the wood cellulose through one or more of the hydroxyl groups on the wood cellulose.
66. (New) The process according to claim 65, wherein said one or more molecules undergo hydrolysis before being cross-linked to the wood cellulose.
67. (New) The process according to claim 65, wherein said exothermic reaction is initiated by a catalyst.
68. (New) The process according to claim 67, wherein said catalyst is an acid.
69. (New) The process according to claim 65, wherein said one or more molecules includes  $(CH_3)_3SiCl$ .